

AN 1999:286018 CAPLUS  
 DN 130:325795  
 TI Energy radiation curing process for resins containing radiation shielding  
 IN Hayashi, Noriya; Hayashi, Shunichi  
 PA Mitsubishi Heavy Industries, Ltd., Japan  
 SO PCT Int. Appl., 71 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 IC ICM C08G059-40  
 ICS C09D163-00; C09D004-00; C08J005-24  
 CC 37-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

PCT WO 99/20674

4/29/99

Application EFD 9/24/99

= EP 945,475

9/29/99

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9920674	A1	19990429	WO 1998-JP4660	19981015
	W: CA, CN, KR, RU, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	JP 11193322	A2	19990721	JP 1998-283867	19981006
	EP 945475	A1	19990929	EP 1998-947885	19981015
	R: BE, DE, FR, GB, IT, NL				
PRAI	JP 1997-285295		19971017		
	JP 1998-283867		19981006		
	WO 1998-JP4660		19981015		
OS	MARPAT 130:325795				
AB	Title process, esp. for carbon fiber-reinforced plastics, uses .gtoreq.2 photoinitiators, wherein the irradiation source generates a first energy of different kind, which cures the resin or generate a second energy to cure the resin. Thus, 3,4-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate (ERL 4221) 100, a photo-thermal initiator SL 80L 1.75, a cationic photopolymerization catalyst Daicat 11 0.75 parts was mixed in a glass container covered with black paper and irradiated with UV light, and the resin was cured after a few minutes.				
ST	energy radiation resin curing shielding presence				
IT	Carbon fibers, uses				
	RL: MOA (Modifier or additive use); USES (Uses)				
	(-reinforced composite; energy radiation curing process for resins contg. radiation shielding)				
IT	Diazonium compounds				
	Phosphonium compounds				
	Pyridinium compounds				
	Sulfonium compounds				
	RL: CAT (Catalyst use); USES (Uses)				
	(catalyst; energy radiation curing process for resins contg. radiation shielding)				
IT	Crosslinking				
	Photopolymerization catalysts				
	(cationic; energy radiation curing process for resins contg. radiation shielding)				
IT	Adhesives				
	Coatings				
	Crosslinking				
	Crosslinking catalysts				
	Fiber-reinforced composites				
	Inks				
	Light-sensitive materials				
	Photochemical crosslinking				

Photochemical crosslinking catalysts  
 Radical crosslinking  
 Radiochemical crosslinking  
 Sealing compositions  
 Varnishes  
 (energy radiation curing process for resins contg. radiation shielding)  
 IT Epoxy resins, processes  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (energy radiation curing process for resins contg. radiation shielding)  
 IT Butadiene rubber, processes  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (epoxidized, PB 3600; energy radiation curing process for resins contg. radiation shielding)  
 IT Onium compounds  
 RL: CAT (Catalyst use); USES (Uses)  
 (iodonium, catalyst; energy radiation curing process for resins contg. radiation shielding)  
 IT Cationic polymerization catalysts  
 (photochem.; energy radiation curing process for resins contg. radiation shielding)  
 IT 9003-17-2  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (butadiene rubber, epoxidized, PB 3600; energy radiation curing process for resins contg. radiation shielding)  
 IT 32760-80-8, Irgacure 261 87301-55-1, Sanaid SI 100 106587-18-2, Dimethyl-4-thiophenoxyphenylsulfonium hexafluoroantimonate 125054-47-9 134508-06-8, Dibenzyl-4-hydroxyphenylsulfonium hexafluoroantimonate 135691-31-5, 4-Acetoxyphenyldimethylsulfonium hexafluoroantimonate 200075-02-1, CI 2855 223560-77-8 223714-52-1, CI 2734 223714-53-2, Daicat 11  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalyst; energy radiation curing process for resins contg. radiation shielding)  
 IT 106611-10-3, Bis[4-(dimethylsulfonio)phenyl] sulfide bis(hexafluorophosphate) 219134-67-5, SI 80L  
 RL: CAT (Catalyst use); USES (Uses)  
 (energy radiation curing process for resins contg. radiation shielding)  
 IT 2386-87-ODP, polymers with vinyl-contg. cycloaliph. epoxides 53895-44-6P  
 77272-87-8P 143685-65-8P 175648-62-1P 191035-71-9P 223560-82-5P 223560-84-7P 223560-86-9P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (energy radiation curing process for resins contg. radiation shielding)  
 IT 25068-38-6, Epikote 828 25085-98-7, ERL 4221 29407-84-9, Epikote 815 29797-71-5, ERL 4299 61090-00-4, Epiclon N 740 63939-13-9, Epikote 154 65581-98-8, Epiclon 830 80111-79-1, EOCN 102S 81775-74-8, EPPN 201 84778-06-3, Epikote 152 96957-48-1, Epiclon N 665  
 104841-49-8, EOCN 1020 106387-90-0, Epikote YX 310 117681-05-7, Epikote 1001B80 122157-50-0, Epikote 5046B80 135151-14-3, Araldite CY 177 151465-23-5, Celloxide 2081 159777-68-1, Epikote 806  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)

RN 219134-67-5 REGISTRY  
CN Sanaid SI 80L (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN SI 80L  
MF Unspecified  
CI MAN  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

21 REFERENCES IN FILE CA (1967 TO DATE)

21 REFERENCES IN FILE CAPLUS (1967 TO DATE)

RN 25085-98-7 REGISTRY  
CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, homopolymer (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymers (8CI)

OTHER NAMES:

CN (3,4-Epoxy cyclohexyl)methyl 3,4-epoxycyclohexylcarboxylate polymer  
CN 3,4-Epoxy cyclohexylmethyl 3',4'-epoxycyclohexanecarboxylate polymer  
CN 3,4-Epoxy cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate polymer  
CN 3,4-Epoxy cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate resin  
CN 3,4-Epoxy cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate homopolymer  
CN 3,4-Epoxy cyclohexylmethyl-3',4'-epoxycyclohexanecarboxylate homopolymer  
CN Adeka Optomer ERL 4221  
CN Adeka Optomer KRM 2110  
CN Araldite CY 179  
CN Bakelite ERL 4221  
CN Bakelite ERL 4221G  
CN Bakelite ERL 4421  
CN CEL 2021P  
CN Celloxide 2021  
CN Celloxide 2021A  
CN Celloxide 2021P  
CN Celloxide 2201  
CN CH 221  
CN Chissonox 221  
CN Chissonox CX 221  
CN CP 1608  
CN CX 221  
CN CY 179  
CN Cyclomer 2021P  
CN Cyracure 6110  
CN Cyracure UVI 6110  
CN Cyracure UVR 6100  
CN Cyracure UVR 6105  
CN Cyracure UVR 6110  
CN Degacure K 126  
CN Degussa 126  
CN Diepoxid 126  
CN Epikote 171  
CN ER 4221  
CN ERL 4211  
CN ERL 4221  
CN ERL 4221D  
CN ERL 4221E  
CN ERL 4421  
CN ERLA 4221  
CN K 126  
CN KRM 2110  
CN Poly[(3,4-epoxycyclohexyl)methyl 3,4-epoxycyclohexanecarboxylate]  
CN SarCat K 126  
CN Ucar 4221  
CN Unox 221  
CN Unox 4221  
CN UP 632  
CN Uvacure 1500

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for  
DISPLAY

DR 9083-95-8, 11120-79-9, 125053-37-4, 121396-47-2, 129773-39-3, 95078-13-0,  
95078-14-1, 50809-37-5, 50861-60-4, 61489-54-1, 65430-69-5, 111483-58-0,  
137607-28-4, 146123-76-4, 30350-17-5, 39354-66-0, 52725-58-3,  
189201-55-6,  
216496-08-1, 251369-29-6, 299423-35-1

MF (C14 H20 O4)x

CI PMS, COM

PCT Epoxy resin, Polyester

LC STN Files: BIOSIS, CA, CAPLUS, CASREACT, CHEMLIST, CIN, IFICDB, IFIPAT,  
IFIUDB, PROMT, TOXCENTER, USPATFULL

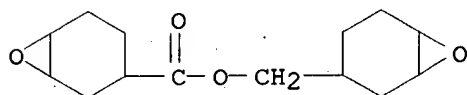
Other Sources: NDSL\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

CM 1

CRN 2386-87-0

CMF C14 H20 O4



1752 REFERENCES IN FILE CA (1967 TO DATE)

132 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1758 REFERENCES IN FILE CAPLUS (1967 TO DATE)